

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) ~~Product of the A biochip type,~~  
comprising:

a flat solid support having a surface covered with a metal capable of coordination bonding with a phosphate group $[[,]]$ ;and

at least one biopolymer carrying a free phosphate group  $OP(O)(OH)_2$  being immobilized on said surface by ionocovalent bonding between the free phosphate group of the polymer and the metal.

2. (currently amended) ~~Product~~ The biochip according to claim 1, wherein the biopolymer is a nucleic acid phosphorylated in the 5' position.

3. (currently amended) ~~Product~~ The biochip according to claim 1, wherein the biopolymer is a nucleic acid phosphorylated in the 3' position.

4. (currently amended) ~~Product~~ The biochip according to claim 2, characterized in that the nucleic acid has a

polyguanine (polyG) spacer group between the body of the nucleic acid and the phosphate group.

5. (currently amended) ~~Product~~ The biochip according to claim 1, wherein the biopolymer is a phosphorylated protein.

6. (currently amended) ~~Product~~ The biochip according to claim 1, wherein the biopolymer is a phosphorylated oligo- or poly-saccharide.

7. (currently amended) ~~Product~~ The biochip according to claim 1, wherein the metal is bound to the surface of the support by way of a spacer molecule.

8. (currently amended) ~~Product~~ The biochip according to claim 7, wherein the spacer molecule comprises a fatty acid chain carrying a phosphonate group to which the metal binds by ionocovalent bonding.

9. (currently amended) ~~Product~~ The biochip according to claim 1, wherein the metal is zirconium.

10. (currently amended) ~~Product~~ The biochip according to claim 8, wherein the spacer molecule is octadecylphosphonic acid and the metal is zirconium.

11. (currently amended) ~~Product~~ The biochip according to claim 1, wherein the support is glass.

12. (currently amended) ~~Product~~ The biochip according to claim 1, further comprising:

a sheet of glass having a surface covered with a monolayer of zirconium octadecylphosphonate[[,]]; and

at least one nucleic acid carrying a phosphate group in the 5' position being immobilized on said surface by ionocovalent bonding between the phosphate group of the nucleic acid and the zirconium.

13. (currently amended) Method for making a ~~product of the biochip type,~~ as defined in claim 1, comprising ~~the immobilization of~~ immobilizing at least one biopolymer carrying a free phosphate group on a solid support having a surface covered with a metal capable of coordination bonding with a phosphate group, the biopolymer being immobilized on said surface by ionocovalent bonding between the free phosphate group of the polymer and the metal.

14. (currently amended) Method according to claim 13, ~~also~~ further comprising a step of obtaining the biopolymer carrying a phosphate group.

15. (original) Method according to claim 14, wherein the polymer is a nucleic acid phosphorylated enzymatically in the 5' position.

16. (currently amended) Kit for the preparation of a ~~product of the biochip type~~ as defined in claim 1, comprising the following elements:

- a solid support having a surface covered with a metal capable of coordination bonding with a phosphate group;
- at least one biopolymer carrying a phosphate group;
- optionally reagents.

17. (currently amended) ~~Use of a product of the biochip type as defined in claim 1, for the purpose of~~ A method of screening compounds, comprising contacting the biochip of claim 1 with an extract from a biological sample, wherein the extract comprises a compound capable of binding to the immobilized biopolymer of the biochip of claim 1.

18. (currently amended) ~~Use of a product of~~ A method of conducting an in vitro diagnosis, comprising conducting said diagnosis with the biochip type as defined in claim 1, as an in vitro diagnostic tool.

19. (currently amended) ~~Product~~ The biochip according to claim 3, characterized in that the nucleic acid has a polyguanine (polyG) spacer group between the body of the nucleic acid and the phosphate group.